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☐ 1: Biochem Biophys Res Commun 1992 Feb 28;183(1):350-6 Related Articles, Links

Entrez  
PubMed

## Diversity among the beta subunits of heterotrimeric GTP-binding proteins: characterization of a novel beta-subunit cDNA.

von Weizsacker E, Strathmann MP, Simon MI.

PubMed  
Services

Institut fur Entwicklungsbiologie, Universitat Koln, FRG.

Related  
Resources

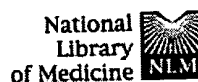
Heterotrimeric guanine nucleotide binding proteins transduce signals from cell surface receptors to intracellular effectors. The alpha subunit is believed to confer receptor and effector specificity on the G protein. This role is reflected in the diversity of genes that encode these subunits. The beta and gamma subunits are thought to have a more passive role in G protein function; biochemical data suggests that beta-gamma dimers are shared among the alpha subunits. However, there is growing evidence for active participation of beta-gamma dimers in some G protein mediated signaling systems. To further investigate this role, we examined the diversity of the beta subunit family in mouse. Using the polymerase chain reaction, we uncovered a new member of this family, G beta 4, which is expressed at widely varying levels in a variety of tissues. The predicted amino acid sequence of G beta 4 is 79% to 89% identical to the three previously known beta subunits. The diversity of beta gene products may be an important corollary to the functional diversity of G proteins.

PMID: 1543505 [PubMed - indexed for MEDLINE]

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264(5) 2401-4



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☐ 1: J Biol Chem 1987 Dec 25;262(36):17254-7

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PubMed

## The G protein beta 2 complementary DNA encodes the beta 35 subunit.

Gao B, Mumby S, Gilman AG.

PubMed  
Services

Department of Pharmacology, Southwestern Graduate School, University of Texas Health Science Center at Dallas 75235.

Antisera were generated against synthetic peptides that correspond to amino acid sequences deduced from a cDNA (designated beta 2) that encodes a second form of the beta subunit of guanine nucleotide-binding regulatory proteins (G proteins). The specificity of interactions of these antisera with purified G protein beta subunits indicates that the beta 2 cDNA encodes the beta 35 form of this polypeptide. This hypothesis is confirmed by the use of these antisera to detect expression of the beta 2 cDNA in COS-m6 cells.

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PMID: 3121593 [PubMed - indexed for MEDLINE]

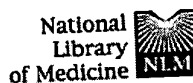
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1: Cell 1992 Dec 24;71(7):1069-72

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**Receptor-to-effector signaling through G proteins: roles for beta gamma dimers as well as alpha subunits.**

**Birnbaumer L.**

PubMed  
Services

Department of Cell Biology, Baylor College of Medicine, Houston, Texas 77030.

Publication Types:

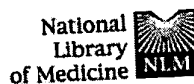
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PMID: 1335363 [PubMed - indexed for MEDLINE]

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1: Science 1991 Dec 6;254(5037):1500-3

Related Articles, Links

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## Type-specific regulation of adenylyl cyclase by G protein beta gamma subunits.

Tang WJ, Gilman AG.

Pharmacology, University of Texas Southwestern Medical Center, Dallas 75235.

PubMed  
Services

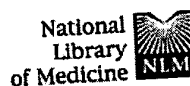
Heterotrimeric guanine nucleotide-binding regulatory proteins (G proteins) dissociate into guanosine triphosphate (GTP)-bound alpha subunits and a complex of beta and gamma subunits after interaction with receptors. The GTP-alpha subunit complex activates appropriate effectors, such as adenylyl cyclase, retinal phosphodiesterase, phospholipase C, and ion channels. G protein beta gamma subunits have been found to have regulatory effects on certain types of adenylyl cyclase. In the presence of Gs alpha, the alpha subunit of the G protein that activates adenylyl cyclase, one form of adenylyl cyclase was inhibited by beta gamma, some forms were activated by beta gamma, and some forms were not affected by beta gamma. These interactions suggest mechanisms for communication between distinct signal-transducing pathways.

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PMID: 1962211 [PubMed - indexed for MEDLINE]

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☐ 1: J Biol Chem 1992 Nov 25;267(33):24023-7

Related Articles, Links

Entrez  
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## Selective tissue distribution of G protein gamma subunits, including a new form of the gamma subunits identified by cDNA cloning.

Cali JJ, Balcueva EA, Rybalkin I, Robishaw JD.

PubMed  
Services

Weis Center for Research, Geisinger Clinic, Danville, Pennsylvania 17822.

Related  
Resources

The GTP-binding regulatory proteins (G proteins) that transduce signals from receptors to effectors are composed of alpha, beta, and gamma subunits. Whereas the role of alpha subunits in directly regulating effector activity is widely accepted, it has recently been demonstrated that beta gamma subunits may also directly regulate effector activity. This has made clear the importance of identifying and characterizing beta and gamma subunits. We have isolated a cDNA clone encoding a new gamma subunit, referred to here as the gamma 7 subunit, using probes based on peptide sequences of a gamma subunit previously purified from bovine brain. The clone contains a 1.47-kilobase cDNA insert, which includes an open reading frame of 204 base pairs that predicts a 68-amino acid polypeptide with a calculated M(r) of 7553. The predicted protein shares amino acid identities with the other known gamma subunits, ranging from 38 to 68%. Also characteristic of gamma subunits is a carboxyl-terminal CAAX motif. The expression of the gamma 7 subunit as well as the gamma 2, gamma 3, and gamma 5 subunits was examined in several bovine tissues at both the mRNA and protein levels. Whereas the gamma 2 and gamma 3 subunits were selectively expressed in brain, the gamma 5 and gamma 7 subunits were expressed in a variety of tissues. Thus, the gamma 5 and gamma 7 subunits are the first G protein gamma subunits known that could participate in the regulation of widely distributed signal transduction pathways.

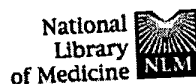
PMID: 1385432 [PubMed - indexed for MEDLINE]

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☐ 1: Science 1988 Nov 18;242(4881):1047-50

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## A bitter substance induces a rise in intracellular calcium in a subpopulation of rat taste cells.

Akabas MH, Dodd J, Al-Awqati Q.

PubMed  
Services

Department of Medicine, College of Physicians and Surgeons, Columbia University, New York, NY 10032.

Related  
Resources

The sense of taste permits animals to discriminate between foods that are safe and those that are toxic. Because most poisonous plant alkaloids are intensely bitter, bitter taste warns animals of potentially hazardous foods. To investigate the mechanism of bitter taste transduction, a preparation of dissociated rat taste cells was developed that can be studied with techniques designed for single-cell measurements. Denatonium, a very bitter substance, caused a rise in the intracellular calcium concentration due to release from internal stores in a small subpopulation of taste cells. Thus, the transduction of bitter taste may occur via a receptor-second messenger mechanism leading to neurotransmitter release and may not involve depolarization-mediated calcium entry.

PMID: 3194756 [PubMed - indexed for MEDLINE]

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File: PGPB

Feb 27, 2003

PGPUB-DOCUMENT-NUMBER: 20030040045  
PGPUB-FILING-TYPE: new  
DOCUMENT-IDENTIFIER: US 20030040045 A1

TITLE: Mammalian sweet taste receptors

PUBLICATION-DATE: February 27, 2003

## INVENTOR-INFORMATION:

| NAME                      | CITY       | STATE | COUNTRY | RULE-47 |
|---------------------------|------------|-------|---------|---------|
| <u>Zuker</u> , Charles S. | San Diego  | CA    | US      |         |
| Nelson, Gregory A.        | San Diego  | CA    | US      |         |
| Chandrashekar, Jayaram    | San Diego  | CA    | US      |         |
| Zhang, Yifeng             | La Jolla   | CA    | US      |         |
| Ryba, Nicholas J.P.       | Bethesda   | MD    | US      |         |
| Hoon, Mark A.             | Kensington | MD    | US      |         |

US-CL-CURRENT: 435/69.1; 435/320.1, 435/325, 435/6, 530/350, 536/23.5

|      |       |          |       |        |                |      |           |           |             |        |      |           |       |
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☐ 2. Document ID: US 20030036630 A1

L6: Entry 2 of 34

File: PGPB

Feb 20, 2003

PGPUB-DOCUMENT-NUMBER: 20030036630  
PGPUB-FILING-TYPE: new  
DOCUMENT-IDENTIFIER: US 20030036630 A1

TITLE: NUCLEIC ACIDS ENCODING A G-PROTEIN COUPLED RECEPTOR INVOLVED IN SENSORY TRANSDUCTION

PUBLICATION-DATE: February 20, 2003

## INVENTOR-INFORMATION:

| NAME                      | CITY          | STATE | COUNTRY | RULE-47 |
|---------------------------|---------------|-------|---------|---------|
| <u>ZUKER</u> , CHARLES S. | SAN DIEGO     | CA    | US      |         |
| ADLER, JON E.             | PACIFIC BEACH | CA    | US      |         |
| LINDEMEIER, JUERGEN       | WERL          | MD    | DE      |         |
| RYBA, NICK                | BETHESDA      | MD    | US      |         |
| HOON, MARK                | KENSINGTON    |       | US      |         |

US-CL-CURRENT: 530/350; 435/320.1, 435/325, 435/69.1, 435/7.1, 530/387.9, 536/23.5

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☐ 3. Document ID: US 20030022288 A1

L6: Entry 3 of 34

File: PGPB

Jan 30, 2003

PGPUB-DOCUMENT-NUMBER: 20030022288  
PGPUB-FILING-TYPE: new  
DOCUMENT-IDENTIFIER: US 20030022288 A1

TITLE: Nucleic acids encoding a G-protein coupled receptor involved in sensory transduction

PUBLICATION-DATE: January 30, 2003

## INVENTOR-INFORMATION:

| NAME                      | CITY          | STATE | COUNTRY | RULE-47 |
|---------------------------|---------------|-------|---------|---------|
| <u>Zuker</u> , Charles S. | San Diego     | CA    | US      |         |
| Adler, Jon E.             | Pacific Beach | CA    | US      |         |
| Lindemeier, Juergen       | Werl          |       | DE      |         |

US-CL-CURRENT: 435/69.1; 435/320.1, 435/325, 530/350, 536/23.5

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWMC | Draw Desc | Image |
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☐ 4. Document ID: US 20030022278 A1

L6: Entry 4 of 34

File: PGPB

Jan 30, 2003

PGPUB-DOCUMENT-NUMBER: 20030022278  
PGPUB-FILING-TYPE: new  
DOCUMENT-IDENTIFIER: US 20030022278 A1

TITLE: T2R, a novel family of taste receptors

PUBLICATION-DATE: January 30, 2003

## INVENTOR-INFORMATION:

| NAME                      | CITY       | STATE | COUNTRY | RULE-47 |
|---------------------------|------------|-------|---------|---------|
| <u>Zuker</u> , Charles S. | San Diego  | CA    | US      |         |
| Adler, Jon Elliot         | Washington | DC    | US      |         |
| Ryba, Nick                | Bethesda   | MD    | US      |         |
| Mueller, Ken              | San Diego  | CA    | US      |         |

US-CL-CURRENT: 435/69.1; 435/320.1, 435/325, 435/7.1, 530/389.1

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWMC | Draw Desc | Image |
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☐ 5. Document ID: US 20020168635 A1

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File: PGPB

Nov 14, 2002

PGPUB-DOCUMENT-NUMBER: 20020168635  
PGPUB-FILING-TYPE: new  
DOCUMENT-IDENTIFIER: US 20020168635 A1



TITLE: NUCLEIC ACIDS ENCODING PROTEINS INVOLVED IN SENSORY TRANSDUCTION

PUBLICATION-DATE: November 14, 2002

## INVENTOR-INFORMATION:

| NAME                | CITY          | STATE | COUNTRY | RULE-47 |
|---------------------|---------------|-------|---------|---------|
| ZUKER, CHARLES S.   | SAN DIEGO     | CA    | US      |         |
| ADLER, JON E.       | WASHINGTON    | DC    | US      |         |
| LINDEMEIER, JUERGEN | WERL          | CA    | DE      |         |
| COWAN, DAVID        | PACIFIC BEACH |       | US      |         |

US-CL-CURRENT: 435/6; 435/5, 435/91.1, 435/91.2

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments |
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☐ 6. Document ID: US 20020164645 A1

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File: PGPB

Nov 7, 2002

PGPUB-DOCUMENT-NUMBER: 20020164645

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020164645 A1

TITLE: Assays for taste receptor cell specific ion channel

PUBLICATION-DATE: November 7, 2002

## INVENTOR-INFORMATION:

| NAME              | CITY      | STATE | COUNTRY | RULE-47 |
|-------------------|-----------|-------|---------|---------|
| Zuker, Charles S. | San Diego | CA    | US      |         |
| Zhang, Yifeng     | La Jolla  | CA    | US      |         |

US-CL-CURRENT: 435/7.1

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments |
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☐ 7. Document ID: US 20020119526 A1

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File: PGPB

Aug 29, 2002

PGPUB-DOCUMENT-NUMBER: 20020119526

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020119526 A1

TITLE: Nucleic acids encoding a G-protein coupled receptor involved in sensory transduction

PUBLICATION-DATE: August 29, 2002

## INVENTOR-INFORMATION:

| NAME                | CITY          | STATE | COUNTRY | RULE-47 |
|---------------------|---------------|-------|---------|---------|
| Zuker, Charles S.   | San Diego     | CA    | US      |         |
| Adler, Jon E.       | Pacific Beach | CA    | US      |         |
| Lindemeier, Juergen | Werl          |       | DE      |         |

US-CL-CURRENT: 435/69.1; 435/320.1, 435/325, 530/350, 536/23.5

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☐ 8. Document ID: US 20020051997 A1

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File: PGPB

May 2, 2002

PGPUB-DOCUMENT-NUMBER: 20020051997  
PGPUB-FILING-TYPE: new  
DOCUMENT-IDENTIFIER: US 20020051997 A1

TITLE: SF, A NOVEL FAMILY OF TASTE RECEPTORS

PUBLICATION-DATE: May 2, 2002

## INVENTOR-INFORMATION:

| NAME              | CITY       | STATE | COUNTRY | RULE-47 |
|-------------------|------------|-------|---------|---------|
| ZUKER, CHARLES S. | SAN DIEGO  | CA    | US      |         |
| ADLER, JON ELLIOT | WASHINGTON | DC    | US      |         |
| RYBA, NICK        | BETHESDA   | MD    | US      |         |
| MUELLER, KEN      | SAN DIEGO  | CA    | US      |         |

US-CL-CURRENT: 435/7.1; 530/350

|      |       |          |       |        |                |      |           |           |             |
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☐ 9. Document ID: US 6537778 B1

L6: Entry 9 of 34

File: USPT

Mar 25, 2003

US-PAT-NO: 6537778  
DOCUMENT-IDENTIFIER: US 6537778 B1

TITLE: Eukaryotic mechanosensory transduction channel

|      |       |          |       |        |                |      |           |           |             |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|
| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments |
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☐ 10. Document ID: US 6383778 B1

L6: Entry 10 of 34

File: USPT

May 7, 2002

US-PAT-NO: 6383778  
DOCUMENT-IDENTIFIER: US 6383778 B1

TITLE: Nucleic acids encoding a G-protein coupled receptor involved in sensory transduction

|      |       |          |       |        |                |      |           |           |             |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|
| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments |
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☐ 11. Document ID: US 6004808 A

L6: Entry 11 of 34

File: USPT

Dec 21, 1999

US-PAT-NO: 6004808

DOCUMENT-IDENTIFIER: US 6004808 A

TITLE: Promiscuous G-protein compositions and their use

|      |       |          |       |        |                |      |           |           |             |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|
| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments |
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☐ 12. Document ID: US 4209288 A

L6: Entry 12 of 34

File: USPT

Jun 24, 1980

US-PAT-NO: 4209288

DOCUMENT-IDENTIFIER: US 4209288 A

TITLE: Frozen confection producing system

|      |       |          |       |        |                |      |           |           |             |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|
| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments |
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☐ 13. Document ID: WO 2054069 A1

L6: Entry 13 of 34

File: EPAB

Jul 11, 2002

PUB-NO: WO002054069A1

DOCUMENT-IDENTIFIER: WO 2054069 A1

TITLE: ASSAYS FOR TASTE RECEPTOR CELL SPECIFIC ION CHANNEL

|      |       |          |       |        |                |      |           |           |             |
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☐ 14. Document ID: WO 9906830 A1

L6: Entry 14 of 34

File: EPAB

Feb 11, 1999

PUB-NO: WO009906830A1

DOCUMENT-IDENTIFIER: WO 9906830 A1

TITLE: METHOD FOR MODULATING G-PROTEIN COUPLED RECEPTORS

|      |       |          |       |        |                |      |           |           |             |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|
| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments |
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| KWIC | Draw Desc | Image |
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☐ 15. Document ID: WO 9903974 A1

L6: Entry 15 of 34

File: EPAB

Jan 28, 1999

PUB-NO: WO009903974A1

DOCUMENT-IDENTIFIER: WO 9903974 A1

TITLE: COMPOSITIONS AND METHODS FOR IDENTIFYING MODULATORS OF TRANSDUCISOMES, A NEW CLASS OF THERAPEUTIC TARGETS

|      |       |          |       |        |                |      |           |           |             |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|
| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|

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| KWIC | Draw Desc | Image |
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☐ 16. Document ID: WO 9748820 A1

L6: Entry 16 of 34

File: EPAB

Dec 24, 1997

PUB-NO: WO009748820A1

DOCUMENT-IDENTIFIER: WO 9748820 A1

TITLE: PROMISCUOUS G-PROTEIN COMPOSITIONS AND THEIR USE

|      |       |          |       |        |                |      |           |           |             |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|
| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|

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| KWIC | Draw Desc | Image |
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☐ 17. Document ID: US 20020164645 A1 WO 200254069 A1

L6: Entry 17 of 34

File: DWPI

Nov 7, 2002

DERWENT-ACC-NO: 2002-583632

DERWENT-WEEK: 200275

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TITLE: Identifying modulators of taste signaling in taste cells for use in food and pharmaceutical industries to customize and regulate taste, by determining effect of the compound on a taste cell-specific ion channel subunit

|      |       |          |       |        |                |      |           |           |             |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|
| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|

|      |           |       |
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| KWIC | Draw Desc | Image |
|------|-----------|-------|

☐ 18. Document ID: WO 200213673 A2 AU 200180070 A

L6: Entry 18 of 34

File: DWPI

Feb 21, 2002

DERWENT-ACC-NO: 2002-329516

DERWENT-WEEK: 200245

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TITLE: Electrostimulation system for use in electrotherapy, includes electromyographic and visual biofeedback for the patient

|      |       |          |       |        |                |      |           |           |             |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|
| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|

|      |           |          |       |
|------|-----------|----------|-------|
| KWIC | Draw Desc | Clip Img | Image |
|------|-----------|----------|-------|

☐ 19. Document ID: WO 200118020 A1 AU 200065101 A

L6: Entry 19 of 34

File: DWPI

Mar 15, 2001

DERWENT-ACC-NO: 2001-244556

DERWENT-WEEK: 200137

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TITLE: New isolated eukaryotic mechanosensory transduction protein useful as probes for sensory cells in animals and to diagnose and treat human conditions involving loss of mechanosensory transduction

|      |       |          |       |        |                |      |           |           |             |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|
| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|

|      |           |       |
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| KWIC | Draw Desc | Image |
|------|-----------|-------|

☐ 20. Document ID: WO 200118050 A2 EP 1214343 A2 AU 200073664 A US  
20020051997 A1 NO 200201164 A

L6: Entry 20 of 34

File: DWPI

Mar 15, 2001

DERWENT-ACC-NO: 2001-211396  
DERWENT-WEEK: 200240  
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TITLE: Nucleic acids encoding the T2R family of G-protein coupled taste receptors, useful for identifying taste modulators that can be used in food and pharmaceutical industries to customize taste, for e.g. to decrease the bitter taste of food

|      |       |          |       |        |                |      |           |           |             |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|
| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|

|      |           |       |
|------|-----------|-------|
| KMHC | Draw Desc | Image |
|------|-----------|-------|

☐ 21. Document ID: WO 200050613 A2 AU 200026870 A

L6: Entry 21 of 34

File: DWPI

Aug 31, 2000

DERWENT-ACC-NO: 2000-549412  
DERWENT-WEEK: 200050  
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TITLE: Methods for transforming carnation plants with exogenous sense and antisense DNA molecules to modulate their phenotype, especially their fragrance

|      |       |          |       |        |                |      |           |           |             |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|
| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|

|      |           |       |
|------|-----------|-------|
| KMHC | Draw Desc | Image |
|------|-----------|-------|

☐ 22. Document ID: WO 200045179 A2 AU 200029760 A

L6: Entry 22 of 34

File: DWPI

Aug 3, 2000

DERWENT-ACC-NO: 2000-499361  
DERWENT-WEEK: 200044  
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TITLE: Identifying a compound that modulates sensory signaling in sensory cells for use in pharmaceutical and food industries comprises contacting the compound with a sensory cell specific G-protein beta polypeptide

|      |       |          |       |        |                |      |           |           |             |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|
| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|

|      |           |       |
|------|-----------|-------|
| KMHC | Draw Desc | Image |
|------|-----------|-------|

☐ 23. Document ID: WO 200044929 A2 AU 200029759 A

L6: Entry 23 of 34

File: DWPI

Aug 3, 2000

DERWENT-ACC-NO: 2000-499336  
DERWENT-WEEK: 200044  
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TITLE: Assaying for compounds that modulate sensory signaling in taste cells, by determining interactions between the compounds and a sensory cell specific G-protein alpha subunit polypeptide

|      |       |          |       |        |                |      |           |           |             |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|
| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|

|      |           |       |
|------|-----------|-------|
| KMHC | Draw Desc | Image |
|------|-----------|-------|

☐ 24. Document ID: MX 2001003258 A1 WO 200018788 A1 AU 9962770 A EP 1117674 A1 BR 9914090 A CN 1321164 A KR 2001085868 A

L6: Entry 24 of 34

File: DWPI

Oct 1, 2001

DERWENT-ACC-NO: 2000-303437  
DERWENT-WEEK: 200274  
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TITLE: Novel sensory cell specific G protein gamma subunit polynucleotides and polypeptides which are involved in sensory transduction and used to screened for modulators

|      |       |          |       |        |                |      |           |           |             |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|
| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|

|      |           |       |
|------|-----------|-------|
| KMNC | Draw Desc | Image |
|------|-----------|-------|

☐ 25. Document ID: AU 753703 B WO 200006592 A1 AU 9952381 A EP 1100810 A1 NO 200100363 A BR 9912545 A ZA 200100401 A CN 1317010 A KR 2001085306 A MX 2001000898 A1 JP 2002521049 W

L6: Entry 25 of 34

File: DWPI

Oct 24, 2002

DERWENT-ACC-NO: 2000-205451  
DERWENT-WEEK: 200277  
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TITLE: New isolated sensory transduction G-protein coupled receptor, useful for developing products for use in studying and modulating the taste transduction pathway

|      |       |          |       |        |                |      |           |           |             |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|
| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|

|      |           |       |
|------|-----------|-------|
| KMNC | Draw Desc | Image |
|------|-----------|-------|

☐ 26. Document ID: JP 2002521050 W WO 200006593 A1 AU 9953241 A EP 1100811 A1 NO 200100320 A BR 9912437 A ZA 200100399 A CN 1318068 A KR 2001085307 A MX 2001000902 A1 US 6383778 B1 US 20020119526 A1

L6: Entry 26 of 34

File: DWPI

Jul 16, 2002

DERWENT-ACC-NO: 2000-195257  
DERWENT-WEEK: 200261  
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TITLE: New isolated sensory transduction G-protein coupled receptor, useful for developing products for use in studying and modulating the taste transduction pathway and for generating taste topographic maps

|      |       |          |       |        |                |      |           |           |             |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|
| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|

|      |           |       |
|------|-----------|-------|
| KMNC | Draw Desc | Image |
|------|-----------|-------|

☐ 27. Document ID: US 20020168635 A1 WO 200006719 A1 AU 9953239 A BR 9912455 A EP 1100893 A1 NO 200100362 A CN 1317044 A KR 2001085308 A MX 2001000899 A1 JP 2002522030 W

L6: Entry 27 of 34

File: DWPI

Nov 14, 2002

DERWENT-ACC-NO: 2000-183123  
DERWENT-WEEK: 200277  
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TITLE: Novel sensory cell specific polypeptide, useful for identifying taste modulating compounds, e.g. for reducing bitterness

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|

| KWIC | Draw Desc | Image |
|------|-----------|-------|
|------|-----------|-------|

- ☐ 28. Document ID: WO 9967499 A1 US 6012529 A NO 200101511 A

L6: Entry 28 of 34

File: DWPI

Dec 29, 1999

DERWENT-ACC-NO: 2000-106322

DERWENT-WEEK: 200009

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TITLE: Downhole guide member for guiding multiple casing strings downhole and maintaining strings in fixed, etc.

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|

| KWIC | Draw Desc | Clip Img | Image |
|------|-----------|----------|-------|
|------|-----------|----------|-------|

- ☐ 29. Document ID: WO 9906830 A1 AU 9886690 A

L6: Entry 29 of 34

File: DWPI

Feb 11, 1999

DERWENT-ACC-NO: 1999-190005

DERWENT-WEEK: 199916

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TITLE: Screening for modulators of G-protein-coupled receptor signal transduction - by determining the activity of an RDGC phosphatase, a protein that has phosphatase activity for G-protein-coupled receptors

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|

| KWIC | Draw Desc | Image |
|------|-----------|-------|
|------|-----------|-------|

- ☐ 30. Document ID: WO 9903974 A1 AU 9884059 A

L6: Entry 30 of 34

File: DWPI

Jan 28, 1999

DERWENT-ACC-NO: 1999-132222

DERWENT-WEEK: 199911

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TITLE: Identifying modulators of signal transduction in cells - used to treat signal transduction related disorders

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|

| KWIC | Draw Desc | Image |
|------|-----------|-------|
|------|-----------|-------|

- ☐ 31. Document ID: WO 9748820 A1 AU 9735728 A US 6004808 A EP 1012324 A1

L6: Entry 31 of 34

File: DWPI

Dec 24, 1997

DERWENT-ACC-NO: 1998-063158

DERWENT-WEEK: 199806

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TITLE: Stable cells containing sequence encoding promiscuous G-alpha protein - useful to identify G-protein coupled receptors or ligands, and agonists or antagonists of signal transduction in cells

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|

| KWMC | Draw Desc | Clip Img | Image |
|------|-----------|----------|-------|
|------|-----------|----------|-------|

☐ 32. Document ID: US 4600178 A

Jul 15, 1986

L6: Entry 32 of 34

File: DWPI

DERWENT-ACC-NO: 1986-204077

DERWENT-WEEK: 198631

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TITLE: Method of protecting roadway maintenance site - has crash cushion suspended below carrier vehicle which lowers it onto road as required

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|

| KWMC | Draw Desc | Image |
|------|-----------|-------|
|------|-----------|-------|

☐ 33. Document ID: US 4209288 A

Jun 24, 1980

L6: Entry 33 of 34

File: DWPI

DERWENT-ACC-NO: 1980-49558C

DERWENT-WEEK: 198028

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TITLE: Apparatus producing frozen confection on stick - where sticks are inserted after formation of frozen crust

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|

| KWMC | Draw Desc | Image |
|------|-----------|-------|
|------|-----------|-------|

☐ 34. Document ID: GB 2026571 A AT 7904732 A CA 1103968 A DE 2833452 A DE 2833452 C DK 7903177 A FR 2433613 A GB 2026571 B IT 1122187 B NL 7905703 A SE 7906280 A SU 931113 A

Feb 6, 1980

L6: Entry 34 of 34

File: DWPI

DERWENT-ACC-NO: 1980-09856C

DERWENT-WEEK: 198006

COPYRIGHT 2003 DERWENT INFORMATION LTD

TITLE: Packaging paper mfr. from waste paper - using sizing agent derived from cereals

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|
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| KWMC | Draw Desc | Image |
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Generate Collection

Print

| Terms     | Documents |
|-----------|-----------|
| Zuker.in. | 34        |

Display Format: -

Change Format



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[Next Page](#)

Fri Sep 28 10:45:08 2001

us-09-492-029-3.rpr

Page 1

GenCore version 4.5  
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OM protein - protein search, using sw model

Run on: September 28, 2001, 10:28:49 ; Search time 25.94 Seconds  
(without alignments)  
998.433 Million cell updates/sec

Title: US-09-492-029-3  
Sequence: 1 MGEMOLKQEAQKQIAD.....TADGMAVATGSMDSFLKTN 340

Scoring table: BLOSUM62  
Gapop 10.0, Gapext 0.5

Searched: 219241 seqs, 7617452 residues  
Total number of hits satisfying chosen parameters: 219241

Minimum DB seq length: 0  
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database: 1: PIR.68:\*  
2: PIR1:\*  
3: PIR2:\*  
4: PIR3:\*  
5: PIR4:\*

Pred. No. is the number of results predicted by chance to have a  
score greater than or equal to the score of the result being printed,  
and is derived by analysis of the total score distribution.

# SUMMARIES

| Result No. | Score | Query Match | Length | DB ID    | Description        |
|------------|-------|-------------|--------|----------|--------------------|
| 1          | 1809  | 100.0       | 340    | 2 153871 | G-protein beta-sub |
| 2          | 1762  | 97.4        | 340    | 1 RGHUB3 | GTP-binding regula |
| 3          | 1573  | 87.0        | 340    | 1 RGHUB1 | GTP-binding regula |
| 4          | 1573  | 87.0        | 340    | 1 RGHUB1 | G protein beta 1 - |
| 5          | 1573  | 87.0        | 340    | 1 JG5057 | GTP-binding regula |
| 6          | 1523  | 84.2        | 340    | 1 RGHUB2 | hypothetical prote |
| 7          | 1520  | 84.0        | 340    | 2 T20830 | GTP-binding regula |
| 8          | 1515  | 83.7        | 340    | 1 RGMKB  | GTP-binding regula |
| 9          | 1493  | 82.5        | 340    | 1 RGMKB4 | GTP-binding regula |
| 10         | 1482  | 81.9        | 341    | 2 S34348 | GTP-binding regula |
| 11         | 1467  | 81.1        | 326    | 1 RGOBE2 | GTP-binding regula |
| 12         | 1467  | 81.1        | 341    | 1 RGOBE  | GTP-binding regula |
| 13         | 1452  | 80.3        | 340    | 1 RGFEBH | GTP-binding regula |
| 14         | 1425  | 67.7        | 347    | 2 A47370 | beta-5-GTP-binding |
| 15         | 945.5 | 52.3        | 353    | 2 A54969 | hypothetical prote |
| 16         | 939.5 | 51.9        | 356    | 2 T22478 | GTP-binding regula |
| 17         | 844   | 46.7        | 380    | 2 T02085 | GTP-binding protei |
| 18         | 828   | 45.8        | 380    | 2 T02085 | GTP-binding protei |
| 19         | 827   | 45.7        | 377    | 2 T07376 | G-protein beta cha |
| 20         | 826   | 45.7        | 346    | 1 RGFEB  | GTP-binding regula |
| 21         | 826   | 45.7        | 375    | 2 T03256 | GTP-binding protei |
| 22         | 825   | 45.6        | 377    | 2 T04086 | GTP-binding protei |
| 23         | 825   | 45.2        | 377    | 2 T04089 | GTP-binding regula |
| 24         | 817   | 43.9        | 380    | 2 T05266 | GTP-binding regula |
| 25         | 794   | 43.8        | 377    | 2 T08036 | GTP-binding protei |
| 26         | 792   | 40.9        | 283    | 2 T16985 | hypothetical prote |
| 27         | 739.5 | 36.7        | 317    | 2 T17256 | GTP-binding regula |
| 28         | 664   | 36.7        | 317    | 2 S72457 | GTP-binding regula |
| 29         | 663   | 36.7        | 305    | 2 T50474 | GTP-binding regula |

|    |       |      |      |   |        |                    |
|----|-------|------|------|---|--------|--------------------|
| 30 | 635   | 35.1 | 423  | 2 | S60939 | GTP-binding protei |
| 31 | 601   | 33.2 | 123  | 2 | S29121 | GTP-binding regula |
| 32 | 592.5 | 32.8 | 240  | 2 | T02059 | GTP-binding regula |
| 33 | 383.5 | 21.2 | 1356 | 2 | T18521 | beta transducin-11 |
| 34 | 310   | 17.1 | 1049 | 2 | T42045 | probable WD-repeat |
| 35 | 308   | 17.0 | 333  | 2 | G85034 | U4/U6 snRNP 52K pr |
| 36 | 305.5 | 16.9 | 465  | 2 | A32569 | trp-asp repeat con |
| 37 | 305   | 16.9 | 502  | 2 | T41148 | GTP-binding protei |
| 38 | 297.5 | 16.4 | 317  | 2 | A33928 | GTP-binding regula |
| 39 | 297.5 | 16.4 | 317  | 2 | B33928 | GTP-binding regula |
| 40 | 297.5 | 16.4 | 317  | 2 | S45054 | GTP-binding regula |
| 41 | 297.5 | 16.4 | 317  | 2 | S38598 | GTP-binding regula |
| 42 | 297.5 | 16.4 | 317  | 2 | A36986 | activated protein  |
| 43 | 295.5 | 16.3 | 586  | 2 | T38992 | WD-40 repeat regul |
| 44 | 295   | 16.3 | 704  | 2 | S33263 | transcription init |
| 45 | 294   | 16.3 | 554  | 2 | T02445 | probable U4/U6 sma |

## ALIGNMENTS

RESULT 1  
153871 G-protein beta-subunit - rat  
C:Species: Rattus norvegicus (Norway rat)  
C:Date: 29-May-1998 #sequence\_revision 29-May-1998 #text\_change 21-Jan-2000  
C:Accession: 153871  
R:Ray, K., Robishaw, J.D.  
Gene 149, 337-340, 1994  
A:Title: Cloning and sequencing of a rat heart cDNA encoding a G-protein beta subunit  
A:Reference number: 153871; PMID:95047499  
A:Accession: 153871  
A:Status: preliminary; translated from GB/EMBL/DBJ  
A:Molecule type: DNA  
A:Residues: 1-340 <RES>  
A:Cross-references: GB:L29090; NID:9456703; PID:AAA62620.1; PID:9456704  
C:Superfamily: GTP-binding regulatory protein beta chain; WD repeat homology  
F:222-255/Domain: WD repeat homology <MD>

Query Match 100.0%; Score 1809; DB 2; Length 340;  
Best Local Similarity 100.0%; Pred. No. 2.2e-142; Indels 0; Gaps 0;  
Matches 340; Conservative

|    |     |   |     |
|----|-----|---|-----|
| QY | 1   | MGEMOLKQEAQKQIADARRACADITLALVSGLEVGVRGMQRTTRRLRGLAKIYA    | 60  |
| DB | 1   | MGEMOLKQEAQKQIADARRACADITLALVSGLEVGVRGMQRTTRRLRGLAKIYA    | 60  |
| QY | 61  | MEMATDSKILVSAQODKILVMDITTTNKVHAIPRSSVMTCAVAPSGNVACGGIDNM  | 120 |
| DB | 61  | MEMATDSKILVSAQODKILVMDITTTNKVHAIPRSSVMTCAVAPSGNVACGGIDNM  | 120 |
| QY | 61  | MEMATDSKILVSAQODKILVMDITTTNKVHAIPRSSVMTCAVAPSGNVACGGIDNM  | 180 |
| DB | 61  | MEMATDSKILVSAQODKILVMDITTTNKVHAIPRSSVMTCAVAPSGNVACGGIDNM  | 180 |
| QY | 121 | CSYSLKSRGKVVKRSRLSAHTGILSCRFDDNNIVTSSGDTTCALMDIETGQKTF    | 180 |
| DB | 121 | CSYSLKSRGKVVKRSRLSAHTGILSCRFDDNNIVTSSGDTTCALMDIETGQKTF    | 180 |
| QY | 181 | VGHGTGDKSLVSPDKLFIISGACDASAKLMDVREGTCRQTFGHSDDINAIKFPNGEA | 240 |
| DB | 181 | VGHGTGDKSLVSPDKLFIISGACDASAKLMDVREGTCRQTFGHSDDINAIKFPNGEA | 240 |
| QY | 181 | VGHGTGDKSLVSPDKLFIISGACDASAKLMDVREGTCRQTFGHSDDINAIKFPNGEA | 300 |
| DB | 181 | VGHGTGDKSLVSPDKLFIISGACDASAKLMDVREGTCRQTFGHSDDINAIKFPNGEA | 300 |
| QY | 241 | ICTGSDASCRFLDRLADDELTAISHESITIGITSVAFLSGLRFLFAGYDFNCNWSL  | 300 |
| DB | 241 | ICTGSDASCRFLDRLADDELTAISHESITIGITSVAFLSGLRFLFAGYDFNCNWSL  | 300 |
| QY | 301 | KCEKGVLSGHDNVSCLGVTADGMAVATGSMDSFLKTN 340                 |     |
| DB | 301 | KCEKGVLSGHDNVSCLGVTADGMAVATGSMDSFLKTN 340                 |     |

RESULT 2  
RGHUB3 GTP-binding regulatory protein beta-3 chain - human  
N:Alternate names: guanine nucleotide binding protein beta-3 chain; heterotrimeric G-

A:Cross-references: GB:X04526; NID:931667; PIDN:CAA28207.1, PID:g31669  
A:Experimental source: liver  
A>Note: The authors translated the codon GAG for residues 138 and 172 as Gln  
C:Comment: The G proteins are a family of guanine nucleotide-binding proteins that r  
ans. The beta and gamma chains, required for GTPase activity, appear to be common t  
rase. It is specific for each type of G protein.  
C:Comment: In mammals, four distinct types of beta chains have been found.  
C:Genetics:  
A:Gene: GDB:GNB1  
A:Cross-references: GDB:119279; OMIM:139380  
A:Map position: 1p36-1p31.2  
C:Superfamily: GTP-binding regulatory protein beta chain; WD repeat homology  
C:Keywords: GTP binding; heterotrimer; signal transduction  
F:51-84/Domain: WD repeat homology <WD1>  
F:88-126/Domain: WD repeat homology <WD2>  
F:139-171/Domain: WD repeat homology <WD3>  
F:180-213/Domain: WD repeat homology <WD4>  
F:222-255/Domain: WD repeat homology <WD5>  
F:263-299/Domain: WD repeat homology <WD6>  
F:308-340/Domain: WD repeat homology <WD7>

Query Match 87.0%; Score 1573; DB 1; Length 340;  
Best Local Similarity 83.2%, 31; Mismatches 26; Indels 0; Gaps 0;  
Matches 283; Conservative

Dy 1 MGSEDLKQEADELKKQIADARKACADITLAEVSGLEPVGRVGMRTTFLRGLAKIYA 60  
|:::|||||||:::|||||||:::|||||||:::|||||||:::|||||||  
1 MSELDLRKEADELKQIRDAKACADATLSQITNNIDPVRIGMRRTLLRGLAKIYA 60  
  
Dy 61 MHNAETSKILIVASGOGKLIVMDYTTNKVAHPIPRSSWMTCAVAPSGNFVACGGIDNN 120  
|:::|||||||:::|||||||:::|||||||:::|||||||:::|||||||  
61 MHMGTDRLVYSAGOGKLIWMSTYTNTKVHAIPRSSWMTCAVAPSGNVACGGIDNI 120  
  
Dy 121 CSYISIKSREGNPKVRSRELSAHFGYLSCRCRFDDNNITYSSGDFCALMDETGOQRTVF 180  
|:::|||||||:::|||||||:::|||||||:::|||||||:::|||||||  
121 CSIYNLTTRGNNRVSRSELGHGTGYLSCGFEDDNGIYISSGDTFCALMDETFGOQRTVF 180  
  
Dy 181 VGHGTGDCKSLAVSPDYKLFIFSGACDASAklMDVRECTGQTGTGHESDINATCFPPNGEA 240  
|:::|||||||:::|||||||:::|||||||:::|||||||:::|||||||  
181 TGHGTGVMSLSLADPTRLFVSACDASAklMDVRECQKTGTGHESDINATCFPPNGMA 240  
  
Dy 241 ICTGSDDASCLPLRADQELTAHSIESICGITSVAFLSGRLFPAGYDDFNCAVMDSL 300  
|:::|||||||:::|||||||:::|||||||:::|||||||:::|||||||  
241 FMTGSDDATCFLPLRADQELMTSHDNITTCGITSVSFSKSGRLLAGYDDFNCAVMRAL 300  
  
Dy 301 KCERVGLSGHDNRVSCIGVTADGMAVATGSGWDSFLAIKN 340  
|:::|||||||:::|||||||:::|||||||:::|||||||:::|||||||  
301 KADRAGVTLAGHDNRVSCIGVTDDGMAVATGSGWDSFLAIKN 340

RESULT 4  
RGSOBI  
GTP-binding regulatory protein, beta-1 chain - bovine  
N:Alternate names: guanine nucleotide binding protein beta-1 chain; heterotrimeric G  
C:Species: Bos primigenius taurus (cattle)  
C>Date: 31-Dec-1992 #sequence\_revision 31-Dec-1992 #text\_change 22-Jun-1999  
C:Accession: A24225; A25457  
R:Sugimoto, K.; Mukada, T.; Tanabe, T.; Takahashi, H.; Noda, M.; Minamino, N.; Kangai  
FEBS Lett. 191, 235-240, 1985  
A>Title: Primary structure of the beta-subunit of bovine transducin deduced from the  
A:Reference number: A24225; MUID:86030675  
A:Accession: A24225  
A:Molecule type: mRNA  
A:Residues: 1-340 <SDG>  
A:Cross-references: GB:X03073 Hopkins, R.S.; Maize-Lye, R.; Johnson, M.S.; Doolittle,  
Proc. Natl. Acad. Sci. U.S.A. 83, 2162-2166, 1986  
A>Title: Repetitive segmental structure of the transducin beta subunit: homology with  
A:Reference number: A25457; MUID:8617563  
A:Molecule type: mRNA  
A:Residues: 1-340 <PON>